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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Complete Listing of Claims:

1. (Currently amended) A device comprising:
 - a substrate (16) having first and second generally opposite surfaces, the substrate (16) first surface having a plurality of bond sites (62) disposed thereon;
 - a die (14) mounted to first surface of the substrate (16), the die (14) having first and second generally opposite surfaces parallel to the substrate (16) first and second surfaces, the die (14) first surface having a plurality of I/O pads (60) disposed thereon, the I/O pads (60) being electrically connected to the bond sites (62);
 - a molding compound (18) encapsulating the die (14) and at least the first surface of the substrate (16); and
 - a heat spreader (20) at least partially embedded in the molding compound (18) and having a peripheral cut edge portion (32) aligned with and not recessed from associated peripheral cut edge portions (34, 36) of the substrate (16) and molding compound (18).
2. (Original) The device of claim 1, wherein the heat spreader (20) has first and second generally opposite surfaces parallel to the die (14) first and second surfaces, the heat spreader (20) second surface being covered by the molding compound (18) and the heat spreader (20) first surface being uncovered by the molding compound (18).
3. (Original) The device of claim 2, wherein the heat spreader (20) is thermally connected to the die by a material (88) having a thermal conductivity higher than a thermal conductivity of the molding compound (18).

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4. (Original) The device of claim 2, wherein the heat spreader (20) includes a protrusion (100) extending from the heat spreader (20) second surface, the protrusion contacting the die (14).
5. (Original) The device of claim 1, wherein the heat spreader (20) includes a down-set leg (52) contacting the substrate (16) first surface.
6. (Original) The device of claim 5, wherein the heat spreader (20) is electrically connected to the substrate (16).
7. (Original) The device of claim 1, wherein the heat spreader (20) is entirely separated from the substrate (16).
8. (Original) The device of claim 1, wherein the heat spreader (20) includes through holes (104) disposed therein for the ingress of the molding compound (18) between the heat spreader (20) and the substrate (16).
9. (Original) The device of claim 1, wherein the substrate (16) is a metallic lead frame.
10. (Original) The device of claim 1, wherein the substrate (16) comprises a dielectric material (66) having first electrical conductors (72) disposed thereon, the first electrical conductors (72) being selected from at least one of electrically conductive traces, layers, vias, pins, and combinations including one or more of the foregoing.

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11. (Currently amended) A device comprising:

a substrate (16) having first and second generally opposite surfaces, the substrate (16) first surface having a plurality of bond sites (62) disposed thereon, wherein the substrate (16) comprises a dielectric material (66) having:

first electrical conductors (72) disposed thereon, the first electrical conductors (72) being selected from at least one of electrically conductive traces, layers, vias, pins, and combinations including one or more of the foregoing; and

~~The device of claim 10 further comprising:~~ an array of second electrical conductors (70) electrically coupling the substrate (16) to an external circuit, the second electrical conductors (70) being selected from at least one of solder balls, solder bumps, solder paste, pins, and combinations including one or more of the foregoing;

a die (14) mounted to first surface of the substrate (16), the die (14) having first and second generally opposite surfaces parallel to the substrate (16) first and second surfaces, the die (14) first surface having a plurality of I/O pads (60) disposed thereon, the I/O pads (60) being electrically connected to the bond sites (62);

a molding compound (18) encapsulating the die (14) and at least the first surface of the substrate (16); and

a heat spreader (20) at least partially embedded in the molding compound (18) and having a peripheral cut edge portion (32) aligned with and not recessed from associated peripheral cut edge portions (34, 36) of the substrate (16) and molding compound (18).

12. (Original) The device of claim 1, further comprising:

a plurality of wires (64) or conductive tape strips, each being electrically connected between an I/O pad (60) on the die (14) first surface and a bond site (62) on the substrate (16) first surface.

13. (Original) The device of claim 1, wherein each of the I/O pads (60) on the die (14) is directly electrically connected to a bond site (62) on the substrate (16) in flip-chip fashion.

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14. - 25. (Canceled)